

The opinion in support of the decision being entered today was *not* written
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID STUTSMAN

Appeal 2006-1445
Application 09/290,777
Technology Center 3700

Decided: February 28, 2007

Before WILLIAM F. PATE III, JENNIFER D. BAHR, and
LINDA E. HORNER, *Administrative Patent Judges*.

WILLIAM F. PATE III, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

This is an appeal from the final rejection of claims 1, 3-5 and 11-14. Claims 16-20 stand allowed. Claims 6-10 and 15 stand objected to as containing allowable subject matter but depending from rejected independent claims. These are all of the claims in the application.

The claimed invention is directed to a spindle assembly for a machine tool. The spindle assembly has a lower anti-friction bearing surrounded by a sleeve. The sleeve is adhesively bonded to the housing.

Claim 1, reproduced below, is further illustrative of the claimed subject matter.

1. A spindle assembly for a machine tool comprising:
 - a housing having at least one bearing seat;
 - a bearing having an inner race and an outer race disposed in said at least one bearing seat;
 - a sleeve disposed between one of an inner and outer races of said bearing and said housing, bonded to said housing;
 - a spindle mounted on another one of the inner and outer races wherein said spindle is axially aligned relative to said bearing and said spindle and bearing are displaceable axially relative to said sleeve; and
 - wherein said sleeve is bonded to said housing with a metal-to-metal adhesive bonding material.

The references of record relied upon by the examiner as evidence of obviousness are:

Nenninger 1,761,841 Jun. 03, 1930

Erik Oberg et al., Machinery's Handbook, 2378-2379 (25th ed. 1996).

Claims 1, 3-5 and 11-14 stand rejected under 35 U.S.C. § 103 as unpatentable over Nenninger in view of the Machinery Handbook.

ISSUE

The sole issue for this appeal is whether the examiner has made out, by a preponderance of the evidence, a prima facie case of obviousness with respect to claims 1, 3-5 and 11-14.

FINDINGS OF FACT

We agree with the examiner that Nenninger discloses a housing with a bearing seat or aperture 16, anti-friction bearings and a sleeve or bushing 18. Nenninger mounts his bushing in the housing as appellant discloses is conventional in the prior art with careful machining of the bearing seat. Nenninger further discloses rear anti-friction bearings that are displaceable axially. Nenninger does not disclose bonding the sleeve or bushings to the housing with a metal-to-metal adhesive.

The examiner has also cited pages 2378 and 2379 of the 25th Edition of the Machinery Handbook. The handbook discloses that a previously bolted, riveted or welded joint may benefit from being adhesively bonded. Advantages are that the adhesive joint may both join and seal rather than simply join. The adhesive joint does not concentrate stresses at a point and gives a joint more even distribution of load. The adhesive joint is therefore more resistant to flexural and vibrational stresses.

PRINCIPAL OF LAW

Precedent requires that to find a combination obvious there must be some teaching, suggestion, or motivation in the prior art to select the teachings of separate references and combine them to produce the claimed combination. *In re Johnston*, 435 F.3d 1381, 1384, 77 USPQ2d 1788, 1790 (Fed. Cir. 2006) (citing *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed. Cir. 2001) ("In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention.")); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) ("When the references are in the same field as that of the applicant's invention, knowledge thereof is presumed. However, the test of whether it would have been obvious to select specific teachings and combine them as did the applicant must still be met by identification of some suggestion, teaching, or motivation in the prior art, arising from what the prior art would have taught a person of ordinary skill in the field of the invention."); *In re Fine*, 837 F.2d 1071, 1075, 5USPQ2d 1596, 1598 (Fed. Cir. 1988) (there must be "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references").

However, this is not to imply that the teaching, suggestion, or motivation must be found explicitly in the prior art, since “the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references....” *In re Kahn*, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)(citing *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000)).

When the examiner does not include a teaching, suggestion, or motivation in the examiner’s statement of the rejection, we infer that the examiner has used hindsight to conclude the invention was obvious. *See Kahn*, 441 F.3d at 986, 78 USPQ2d at 1335.

ANALYSIS

Notwithstanding the examiner’s emphasis on the benefits sometimes attributed to adhesive bonding, we do not find any teaching, suggestion or motivation in the prior art to make the specific sleeve-to-housing adhesive bond claimed by appellant. Appellant’s adhesive joint is in a specific location and provides specific benefits not contemplated by the teachings of the handbook. Furthermore, the handbook mentions bolted, riveted or welded joints and does not recognize that the carefully machined bearing seat of Nenninger could be replaced with a roughly machined seat adhesively bonded to a sleeve or bushing. Since we find no teaching, suggestion, or modification in the prior art as applied by the examiner, we must infer that the obviousness rejection on appeal is based on impermissible hindsight.

CONCLUSION

The examiner has failed to establish the prima facie obviousness of claims 1, 3-5 and 11-14.

ORDER

The rejection of claims 1, 3-5 and 11-14 is reversed.

REVERSED

vsh

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